The Colorado Health Foundation™

Treat George Jetson

The Long-Foreseen World of Telehealth is Actually Here

The lure of telehealth comes in large part from hearing the countless series of frustrating or unproductive health encounters that good technology might improve.

The Army veteran from southeastern Colorado with brain trauma and claustrophobia who resists driving two hours to the VA La Junta Clinic for an appointment, let alone four hours to see a specialist in Denver.

The family of a suicidal teenager in rural Jefferson County waiting two hours in a western suburb emergency room, then taking a one-hour transport to University of Colorado Hospital, then waiting hours more only to learn the teen would not be admitted for inpatient care.

And the most mundane situation of all: shivering in a doctor's waiting room to get checked for a bad case of the sniffles. A recent academic study showed the average appointment takes a total of 121 minutes, but only 20 of those minutes are spent seeing the doctor. The other 101? Traveling and waiting.

Now, a promising set of developments is conspiring to solve these sticky health system problems: Technology improving even as it gets cheaper. Lawmakers removing barriers to telehealth access and payment. Providers looking to integrate care and meet consumers where they want to be treated. And the laws of supply and demand working to solve provider shortages.

"Technology is getting better and making a lot of this more possible," said William Jones, MD, telestroke director for UCHealth and a member of the telehealth steering committee for University of Colorado Hospital. "There are a lot

of irons in the fire in telehealth." Even those departments that have been cautiously studying telehealth services "in weeks and months are about to become more active," Jones said.

Fifty-year-old cartoons of characters like George Jetson talking to doctors on a videophone are now, finally, consumer reality in Colorado and other states.

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"It started with 1,000 songs in your pocket on the iPod, and now you've got in your pocket all the computing power of a desktop from 10 years ago," said Brent Bowman, a leader for expansion and innovation with Kaiser Permanente Colorado. "The term we use is 'life integration.' We want to integrate your life and patterns; technology is an extension of who we are."Chris Sadri, a Kaiser Permanente patient, said her doctor suggested she try a video-health appointment in early summer. Sadri sees her doctor regularly for diabetes management and orthopedic issues in her hand.

The transition wasn't bug-free, but the results were good. Sadri first tried to connect on a Chrome notebook but was told by Kaiser's technicians its system didn't work with Chrome's system. So Sadri switched to video on her smartphone with the technicians' help. "It feels a little strange initially, but it's a good thing," Sadri said. "It saved time in me driving down to the office, and I hope it saved

(her doctor) time so she has time for other patients. If you don't have some basic knowledge of how your phone works, or your computer, it might hold you back from doing it. It can be rather frustrating. But it was an adventure, and I hope to continue that adventure. It's a good thing for patients and doctors, especially patients who aren't able to get out of the house."

Some of the most visible signs of telehealth's burgeoning growth in Colorado include:

- Major insurance providers like Anthem, United Healthcare and Kaiser Permanente making video-from-home visits with doctors a standard choice for nearly all clients in 2016. A state law taking effect January 1 is pushing that change, ordering insurers to treat telehealth visits equally with in-person visits throughout the state.
- Rapid spread of delivering behavioral health services – from counseling to addiction treatment – by video appointments in extended hours accommodating working patients' needs.
- Fast adoption of remote-controlled robot aids for quick diagnosis, especially in time-sensitive fields like stroke treatment and burn units.
- Telehealth promotion by overburdened government agencies, such as the Department of Veterans Affairs placing tablets in rural veterans' homes for video communication with remote providers.

This edition of Health Elevations magazine attempts to map a rapidly changing landscape for telehealth in Colorado. Where is change happening most rapidly and who is pushing for it? How are underserved populations being included in the revolution? What still needs to change – in infrastructure, government policy and everyday practice – to successfully extend telehealth services to all who could benefit? How are patients and providers reacting to the new ways of "seeing" each other?

A groundbreaking robot cruising the Platte Valley Medical Center ICU.

The answers can be surprising. Sasha Stiles, MD, who works for a national doctors' group that contracts with Anthem in Colorado to provide new video-health appointments, said telehealth is improving her skills 35 years after medical school.

"I find I'm a better brick-and-mortar doctor now that I've done telehealth," said Stiles, who talks to patients via video connection from her home as well as commuting to other states for in-person obesity medicine. "Half the people I see online are in bed because they're sick and can't go to work, and the other half are at work on their lunch break."

"You get better at getting to specific questions and answers, and your verbal cues are much sharper," said Stiles, whose primary career was with an HMO. "I have to listen to coughs online and listen hard. And there are about 10 really pertinent questions for each case. You have to be really pertinent and precise in telehealth, and that helps you outside telehealth as well."

One surprising assessment from Colorado health leaders is that broadening access to telehealth is actually a marketing challenge. Consumers may have always imagined a video talk with their doctor, but getting them to use it once they have it is not simple.

"Right now, about 16 million Americans have it as a covered benefit, and I'd suggest many still don't know about it," said John Jesser, director of LiveHealth

Online for Anthem's national for-profit insurance company. "Anthem is not a consumer products company. And we need to do that direct-to-consumer marketing."

"There's a degree of reticence, both on the part of physicians and some consumers as well," agreed Bowman of Kaiser Permanente. "It's most easily adopted between a patient and a provider who already have a strong relationship and partnership. The right circumstances have to come up for a patient to want to try it, and it has to be the kind of condition that can be handled that way."

Policy barriers remain that may hinder the natural growth of telehealth services. To promote adoption of telehealth by skeptical providers, states have to guarantee that payers offer the same reimbursement for a service provided by telehealth as they do for inperson visits. (Colorado took care of that by passing House Bill 1029 in 2015, which goes into effect January 1, 2017.)

And many private insurers are launching their video-visit offers to consumers by contracting with special telehealth-focused doctor groups who draw on physicians based in many states. Most states still have laws requiring doctors providing treatment to patients inside their borders to have a license to practice in that state, a daunting task for national physician groups. Professional bodies and regulators are working to create a national licensing standard for physicians, similar to current nursing licensure compacts that allow nurses in dozens of states to practice across borders.

Telehealth is often touted as a proven way to reduce expensive and unnecessary ER or urgent care visits. Studies show that a high percentage of the colds, rashes, urinary infections, stomach ailments and pink eye cases seen in ER or urgent care settings can be treated effectively by phone or video encounter.

A Colorado Health Institute report published in October 2014 summarized a meta-analysis of 18 randomized control trials of realtime video-health consultations.

The health outcomes were just as good as in-person visits in 14 of those trials. A trial of psychology services did not turn out as well as in-person counseling, but nursing and cardiology care delivered by video proved more effective.

But the paradox of telehealth is what worries government and private payers – easy access is easy access. Clients that might have let their condition resolve on its own might use a telehealth visit, costing a Medicaid payer, say, $25, or a private payer $50. “Telehealth may increase overall use of medical services, driving up total health care costs,” the CHI report warned.

It may take a few years of widespread availability of real-time video visits to see overall costs: Reductions in ER and hospital admissions that cost thousands of dollars each would still yield system savings even if there were a small uptick in cheaper, minor-ailment appointments by video link.

Health care leaders in Colorado offer other cautions when enthusiasts talk of telehealth as a cure-all to health delivery.

While an increasing number of insurers cover video visits and other telehealth services, many provider offices will need time and assistance setting up the technology and integrating it into their practices. Blue ribbon panels assisting the Colorado State Innovation Model office are recommending expansion of telehealth as one tool to integrate medical, behavioral, dental and other care in the patient centered home model.

Another common caveat is that putting a provider on a telehealth link can make a system more efficient, but it does not solve a wider provider shortage in many health specialties.

Setting up a child psychiatrist in a home or central office with video links to other locations can cut down on the psychiatrist’s driving time between facilities. It can save time for patients who may be in rural areas or reluctant to leave home, noted

Douglas Novins, MD, chief of psychiatry at Children's Hospital Colorado and a distance-treatment expert at the University of Colorado Anschutz Medical Campus in Denver.

But there's already a shortage of child psychiatrists even along the Front Range, Novins noted. "I spent two hours yesterday on my clinic to Alaska – that's two hours less of me practicing in Denver," he said, as part of a longer Q&A beginning on page 24 of this magazine.

"We still have a shortage of providers," agreed Jay Shore, MD, chief medical officer of AccessCare and director of telemedicine at the University of Colorado Helen and Arthur E. Johnson Depression Center. "Telehealth can be a force multiplier, but ultimately, the bigger issues are still around the total number of providers."

While University of Colorado Health is on the verge of adding telehealth services in departments like neurology, emergency psychiatry and urgent care, among others, its deepest commitment right now is in telestroke.

"When someone comes in with an acute stroke, from when their symptoms started you have 4.5 hours to make a determination. And the earlier the better, meaning they are more likely to benefit and less likely to have complications," Jones said. "Many of the rural areas in our state don't have that resource in any way."

Such a rural area may not see a high volume of strokes, but when it does see one, the value of quick treatment is "incalculable," Jones said, not only to the quality of life of the patient, but "imagine keeping that person from being institutionalized or homebound. The costs start mounting up and up from places you can't even imagine."

Through telehealth, UCHealth can have one of its stroke experts available for video consult to a partner hospital within 15 minutes, and the average to rural

hospitals is closer to seven or eight minutes, Jones said. “Faster than I can drive from my house to University Hospital,” he said.

The equipment at the remote hospital can range from a sophisticated robot that can drive itself around an ER to a simple PC with a good camera and microphone. The UCHealth doctor who is on call works with a laptop set up for telestroke and can also look at X-rays or CT scans sent by the remote hospital.

Even more recent is a mobile telestroke unit set up in a UCHealth ambulance. The ambulance has specialized crews trained in stroke treatment, a mobile CT scanner, and the cameras and other connections that connect to the same on-call group of stroke specialists.

Adding in other uses of high tech, UCHealth has geo-mapped highrisk stroke areas in Aurora and Colorado Springs, and rotates the ambulance to those areas for 12-hour daytime shifts. The system will be part of a national study on health and cost-effectiveness, Jones said.

If it does prove as effective as expected, four or five such units would cover most needs in the greater metro area, he said. Surprisingly, a key lesson learned is about people, not technology, Jones said. Early efforts proved how important it is to have providers and assistants highly trained in stroke protocols at the remote sites.

“That amount of effort pays off hugely when the emergency does come around,” Jones said.

Patients and their families have been overwhelmingly accepting of the technology so far, he added. “They think it’s great they get to see a high-end specialist hundreds of miles away, and they know it wouldn’t be available to them otherwise.”

“Robot rounds” may be the newest marriage of science fiction technology to daily medical care.

The first deployment for the SCL Health system, which encompasses hospitals such as St. Joseph’s in downtown Denver, Lutheran and Good Samaritan in the northwest metro area, and other partnerships, is through a venture with National Jewish Health and Platte Valley Medical Center. Called Tele-ICU, the partnership places a robot in the Platte Valley ICU, controlled by a mouse pad and computer connection at National Jewish. The robot transmits a high-quality video image of the patient and can be maneuvered to focus on any area, while also sending vitals signals.

“Everybody’s getting used to it right now,” said Peter Kung, SCL Health system vice president of virtual health. “Over the next couple of months, our goal is to deploy it on a greater scale so we’re able to deliver that National Jewish expertise into the community.”

All of the SCL Health ventures deeper into telehealth are done with intention and careful forethought, Kung said. “Telehealth is pivotal to the direction we are going,” he said. “The right lens to have on is to treat every patient as if they were a family member. If we keep that lens on, doesn’t it make sense if our care teams can monitor and deliver care to that family member where they are?”

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